



UF4001 - UF4007

Features

- Low forward voltage drop.
- High surge current capability.
- High reliability.
- High current capability.



Fast Rectifiers (Glass Passivated)

Absolute Maximum Ratings*

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Value							Units
		4001	4002	4003	4004	4005	4006	4007	
V_{RRM}	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ $T_A = 75^\circ\text{C}$				1.0				A
I_{FSM}	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave				30				A
T_{stg}	Storage Temperature Range				-65 to +150				$^\circ\text{C}$
T_J	Operating Junction Temperature				-65 to +150				$^\circ\text{C}$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

Thermal Characteristics

Symbol	Parameter	Value							Units
P_D	Power Dissipation				2.08				W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient				60				$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead				15				$^\circ\text{C}/\text{W}$

Electrical Characteristics

$T_A = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Device							Units
		4001	4002	4003	4004	4005	4006	4007	
V_F	Forward Voltage @ 1.0 A			1.0			1.7		V
t_{rr}	Reverse Recovery Time $I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{RR} = 0.25 \text{ A}$			50			75		ns
I_R	Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$				10				μA
C_T	Total Capacitance $V_R = 4.0 \text{ V}, f = 1.0 \text{ MHz}$				50				μA
					17				pF

Typical Characteristics

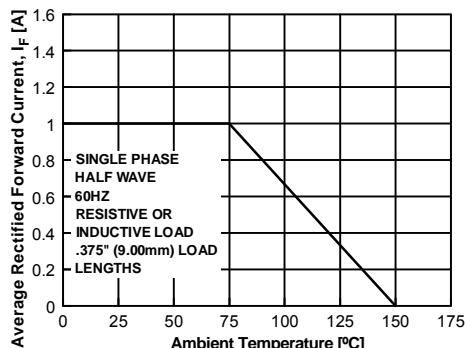


Figure 1. Forward Current Derating Curve

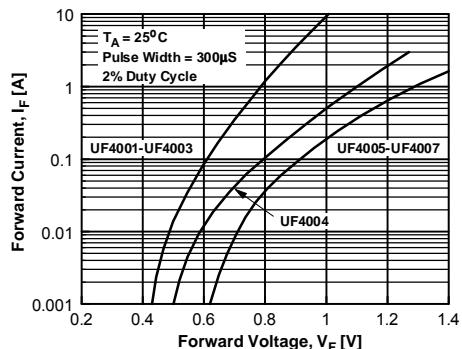


Figure 2. Forward Voltage Characteristics

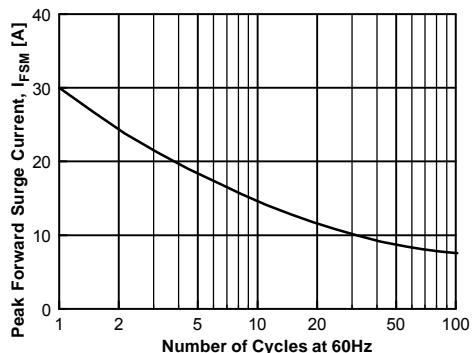


Figure 3. Non-Repetitive Surge Current

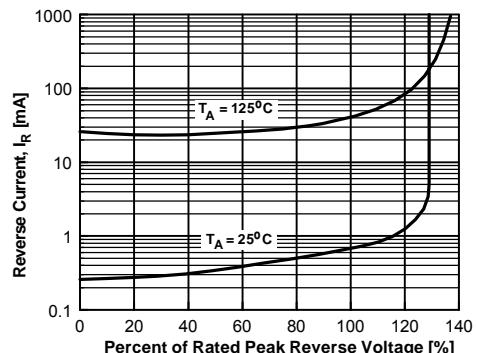


Figure 4. Reverse Current vs Reverse Voltage

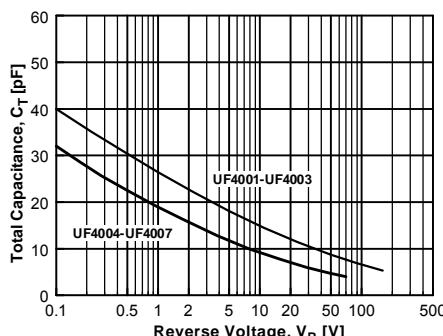
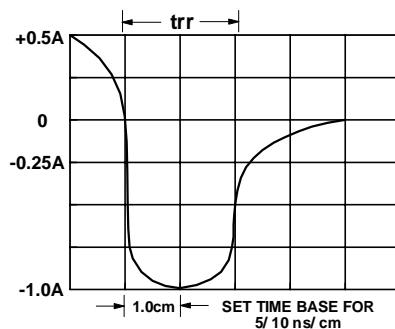
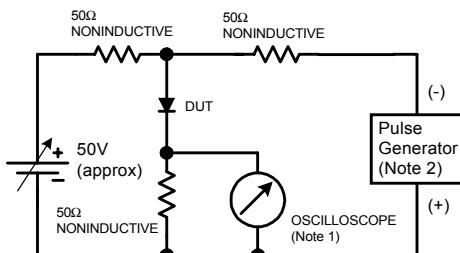


Figure 5. Total Capacitance



Reverse Recovery Time Characteristic and Test Circuit Diagram

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